

ABSTRACT OF THE DISCLOSURE

A gallium nitride (GaN) vertical light emitting diode (LED) structure and a method of separating a substrate and a thin film thereon in the GaN vertical LED are described. The structure has a metal reflective layer for reflecting light. The
5 method provides a laser array over the substrate. A laser light emitted by the laser array is least partially be transparent to the substrate and its energy may be absorbed by the thin film. The thin film is irradiated through the substrate. The substrate is then separated from the thin film.